



## Q/How should you treat the newly diagnosed hypertensive patient?

### EVIDENCE-BASED ANSWER

**A** | IT DEPENDS ON THE PATIENT'S RISK FACTORS, physical condition, and preferences. All hypertensive patients can potentially benefit from lifestyle interventions, including weight reduction, aerobic physical activity, the dietary approaches to stop hypertension (DASH) diet, and moderation of alcohol use (strength of recommendation [SOR]: A, systematic reviews).

Although lifestyle interventions are effective for some patients, they haven't been proven to provide long-term control and don't lower blood pressure as much as med-

ications (SOR: B, systematic review of inconsistent randomized controlled trial [RCT]). For specific high-risk patients, pharmacologic therapy is recommended at the time of diagnosis (SOR: C, expert opinion).

When considering lifestyle changes and medication, it's important to assess patient preferences as well as overall cardiovascular risks, presence of target organ damage, and clinical cardiovascular disease, because lifestyle modification and medication can both affect quality of life (SOR: C, expert opinion).

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**All hypertensive patients can potentially benefit from lifestyle changes, including weight reduction, physical activity, the DASH diet, and limited alcohol use.**

### Evidence summary

The prevalence of hypertension is increasing. Twenty-seven percent of adult Americans are hypertensive; 31% have prehypertension (TABLE).<sup>1</sup> Among adults older than 50 years, the risk of developing high blood pressure approaches 90% if they live to age 80 or older.<sup>2</sup> Cardiovascular risk rises along with blood pressure readings. Blood pressure values in the range of 130/85 to 139/89 mm Hg are associated with a more than 2-fold increase in cardiovascular disease risk compared with values below 120/80 mm Hg.<sup>2</sup>

Even small reductions in blood pressure, when applied to the population as a whole, produce significant improvements in patient-oriented outcomes. A drop in systolic blood pressure of 3 mm Hg can decrease stroke mortality by 8% and coronary artery disease by 5%.<sup>2</sup>

### Lifestyle interventions for treating hypertension

Lifestyle interventions for hypertensive pa-

tients include:

- Striving to maintain or achieve an ideal body weight (body mass index of 18-25).<sup>2</sup> However, even modest weight reductions in overweight and obese hypertensive patients significantly lower blood pressure and overall cardiovascular risk. A 10-kg decrease in body weight can lower systolic blood pressure by 5 to 20 mm Hg.<sup>2</sup>
- Adopting the DASH diet.<sup>1</sup> Consuming a diet rich in fruits, vegetables, and low-fat dairy products and limiting saturated and total fat intake can reduce systolic blood pressure by 2 to 8 mm Hg.
- Engaging in regular physical activity for at least 30 minutes most days of the week. This regimen has been shown to decrease systolic blood pressure by 4 to 9 mm Hg.<sup>2</sup>
- Limiting daily alcohol intake, if the patient drinks, to 2 servings for men and 1 for women and lower-weight individuals.<sup>2</sup> Restricting alcohol consumption

**TABLE**  
**JNC7 classifications of blood pressure in adults**

Blood pressure classification	Blood pressure (mm Hg)	Recommended follow-up
Normal	Systolic <120 AND diastolic <80	2 y
Prehypertension	Systolic 120-139 OR diastolic 80-89	1 y
Stage 1 hypertension	Systolic 140-159 OR diastolic 90-99	2 mo
Stage 2 hypertension	Systolic ≥160 OR diastolic ≥100	1 mo*

JNC7, Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure.

\*For people with higher values (>180/110 mm Hg), evaluate and treat immediately or within 1 week, depending on clinical situation.

Source: Chobanian AV, et al. *Hypertension*. 2003.<sup>2</sup>

**>**  
**Although lifestyle interventions work for some patients, they haven't been shown to provide long-term control and don't lower blood pressure as much as medication.**

may lower systolic blood pressure by 2 to 4 mm Hg.

Randomized controlled trials have consistently demonstrated that patients who combine multiple lifestyle interventions achieve the greatest benefits.<sup>3-5</sup> Success obviously requires patient motivation. Health care providers need to continually assess motivation and encourage adherence.

### Most patients need medication, too

Lifestyle changes alone haven't been shown to achieve the same long-term reductions in blood pressure as medication.<sup>5</sup> Although some motivated patients can control their blood pressure solely by adjusting their lifestyle, few succeed in reaching and maintaining blood pressure goals. Continued attention to lifestyle should be encouraged both to control blood pressure and reduce overall cardiovascular risk, but most patients with hypertension need medication.

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7) doesn't specify whether to offer a trial of therapeutic lifestyle change before starting

medication.<sup>2</sup> Clinicians should negotiate interventions based on each patient's preferences, risk factors, and the presence or absence of clinical cardiovascular disease or target organ damage. Lifestyle changes and medication both can affect quality of life. Immediate pharmacologic treatment with 2 medications has been recommended in addition to lifestyle interventions for patients with stage 2 hypertension (TABLE).<sup>2</sup>

### Recommendations

The European Society of Hypertension provides recommendations for the duration of lifestyle interventions before trying medication. The recommendations are based on a complex scheme of overall cardiovascular risk assessment that takes into account traditional Framingham risks and other factors (such as obesity, C-reactive protein, and microalbuminuria), as well as the stage of hypertension.<sup>6</sup> The Society recommends starting drug therapy immediately in people with blood pressure >180/110 mm Hg. This blood pressure threshold drops in patients with increasing numbers of risk factors. For patients with lower, but still elevated, blood pressure, the recommendations call for

"lifestyle changes for several months, then drug treatment if BP is uncontrolled."

For patients with diabetes, the American Diabetes Association (ADA) recommends a blood pressure goal of <130/80 mm Hg and drug therapy in addition to lifestyle and behavioral therapy for patients with systolic blood pressure  $\geq$ 140 mm Hg or diastolic blood pressure  $\geq$ 90 mm Hg.<sup>7</sup> Like the JNC7, the ADA notes that a combination of medications is often required to achieve blood pressure targets. The ADA recommendations also state that patients with diabetes and a systolic blood pressure of 130 to 139 mm Hg or a diastolic blood pressure of 80 to 89 mm Hg should pursue lifestyle and behavioral interventions alone for a maximum

of 3 months, then start drug therapy if they don't achieve their blood pressure goals.

The American Heart Association and American College of Cardiology offer evidence-based guidelines for secondary prevention in patients with atherosclerosis.<sup>8</sup> They set blood pressure goals of <140/90 mm Hg for all patients and <130/80 mm Hg for patients with diabetes or chronic kidney disease. All patients are encouraged to initiate or maintain lifestyle modifications. If a patient's blood pressure is  $\geq$ 140/90 mm Hg (>130/80 mm Hg for patients with chronic kidney disease or diabetes), medications should be titrated to goal, beginning with beta-blockers or angiotensin-converting enzyme inhibitors. **JFP**

#### References

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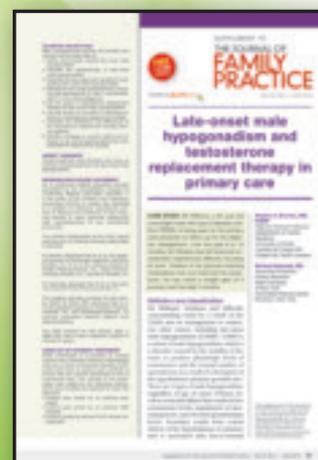
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